APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/659,398	09/11/2000	David W. Jensen	00CR082/KE	5534

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Rockwell Collins Inc
Attention: Kyle Eppele M/S 124 323
400 Collins Road N E
Cedar Rapids, IA   52498

EXAMINER
BONURA, TIMOTHY M

ART UNIT	PAPER NUMBER
2184	

DATE MAILED: 05/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/659,398	JENSEN ET AL.
	Examiner	**Art Unit**	
	Tim Bonura	2184	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☐ Responsive to communication(s) filed on _____ .

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1-20_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) _1-9 and 14-20_ is/are rejected.

7) ☒ Claim(s) _10-13_ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on _10 September 2000_ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .

4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2.   Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hideharu,

Japanese Patent Number 57-43255. Regarding claim 1,

    a.   Hideharu does not disclose that the system is an application processor. Hideharu

does disclose that the system has a processor for processing information. (Lines 12-14 of

the Abstract). It would have been obvious to one of ordinary skill in the art at the time of

the invention to use the processing system of Hideharu as a processing system for

software application. Processing systems are known to process software applications,

one skilled in the art would be able to use the processing system for software.

    b.   Regarding the limitation of an application processor, Hideharu discloses a system

that can process information. (Lines 12-14 of the Abstract). Hideharu discloses a system

that has a controlling processor capable of restarting a plurality of processor if a

monitoring condition indicates that a fault is present. (Lines 1-6 of the Abstract).

Hideharu does not disclose that the system has just application processor. It would have

been obvious to one of ordinary skill in the art to have the system of Hideharu have the

ability of a controlling processor have the capability to reset only one processor instead of

a plurality of processors. Resetting of a processor is known and accepted as commonplace in the art.

3.   Regarding claim 2, Hideharu discloses a system that can change from a functional state to a broken down state. (Lines 12-16 of the Abstract).

4.   Regarding claim 3, Hideharu discloses a system that will read out signals for the doubled processor 10W12 and will detect a state of broken down and generates a signal in response. (Lines 12-21 of the Abstract).

5.   Regarding claim 4, Hideharu discloses a system wherein the response signal is a reset signal. (Lines 18-21 of the Abstract).

6.   Regarding claim 14, Hideharu discloses a system that can process information. (Lines 12-14 of the Abstract). Hideharu discloses a system that has a controlling processor capable of restarting a plurality of processor if a monitoring condition indicates that a fault is present. (Lines 1-6 of the Abstract). Hideharu does not disclose that the system has just application processor. It would have been obvious to one of ordinary skill in the art to have the system of Hideharu have the ability of a controlling processor have the capability to reset only one processor instead of a plurality of processors. Resetting of a processor is known and accepted as commonplace in the art.

7.   Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hideharu as applied to claims 1 above, and further in view of McElreath, U.S. Patent Number 6,401,013. Hideharu teaches of a system with a doubled processor 10W12 and a control process that can detect the state of the doubled processor 10W12 and generate a fault signal for resetting of the doubled processor 10W12 if there is an error in that processor. Hideharu does not teach that the

system must be certified by a government agency. (The examiner determined the FAA is the US

agency for the certification). McElreath discloses a system wherein it is stated that all on-board

components for aircraft must might FAA regulations. (Lines 23-27 and 35-37 of Column 3). It

would have been obvious to one of ordinary skill in the art at the time of the invention to obtain

FAA certification for any equipment being used on an aircraft for flight control.

8.   Regarding claim 6, see claim 5.

9.   Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hideharu as

applied to claims 1 above, and further in view of Johnson, U.S. Patent Number 6,456,928.

Regarding claim 7, Hideharu teaches of a system with a doubled processor 10W12 and a control

process that can detect the state of the doubled processor 10W12 and generate a fault signal for

resetting of the doubled processor 10W12 if there is an error in that processor. (Lines 12-21 of

the Abstract). Hideharu does not teach comparing a value to a predetermined limitation of an

aircraft. Johnson discloses a system that will compare a calculated value to a previous value.

(Lines 23-30 of Column 2, Lines 62-64 of Column 7, Figure 5 items 302-308, and the Abstract

Lines 3-5). It would have been obvious to one of ordinary skill in the art at the time of the

invention to incorporate the comparison of Johnson with the error detection of Hideharu because,

failure of a processor or aircraft failure can be determined before the fault cause a malfunction to

flight control. (Lines 35-40 of Column 1).

10.   Regarding claim 8, Johnson discloses a system with means to have a limitation on rate

change. (Lines 50-60 of Column 7).

11.   Regarding claim 9, Johnson discloses a system where the values are in a table. (Lines 63-

66 of Column 4).

12.   Claims 14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hideharu

and further in view of Johnson and McElreath. Regarding claim 14:

   a. Regarding the limitation of means for executing an avionics software program

   approved by a government agency, Hideharu does not disclose means to execute certified

   software. (The examiner determined the FAA is the US agency for the certification).

   McElreath discloses a system wherein it is stated that all on-board components for

   aircraft must might FAA regulations. (Lines 23-27 and 35-37 of Column 3). It would

   have been obvious to one of ordinary skill in the art at the time of the invention to obtain

   FAA certification for any equipment being used on an aircraft for flight control.

   b. Regarding the limitation of processor processing applications, Hideharu discloses a

   system that can process information. (Lines 12-14 of the Abstract). Hideharu does not

   disclose that the system is an application processor. It would have been obvious to one of

   ordinary skill in the art at the time of the invention to use the processing system of

   Hideharu as a processing system for software application. Processing systems are known

   to process software applications, one skilled in the art would be able to use the processing

   system for software.

   c. Regarding the limitation on not having parallel computing means. Hideharu discloses

   a system that has a controlling processor capable of restarting a plurality of processor if a

   monitoring condition indicates that a fault is present. (Lines 1-6 of the Abstract).

   Hideharu does not disclose that the system has just application processor. It would have

   been obvious to one of ordinary skill in the art to have the system of Hideharu have the

   ability of a controlling processor have the capability to reset only one processor instead of

a plurality of processors. Resetting of a processor is known and accepted as
commonplace in the art.

13.   Regarding claim 15, Johnson discloses a system that is suitable to be run by JAVA. Java
is compiled by the JVM that is a virtual machine. (Liens 35-44 of Column 6).

14.   Regarding claim 16, Hideharu discloses a system that improves a processing system
during times of error. (Lines 1-3 of the Abstract).

15.   Regarding claim 17:

a. Regarding the limitation of a value being generated, Hideharu discloses a system
where a value is generated. (Lines 12-16 of the Abstract).

b. Regarding the limitation of indicating validity, Johnson discloses a system wherein
values are compared to see if they are acceptable or not. (Lines 62-64 of Column 7).

16.   Claims 18-19 are rejected under 35 U.S.C. 103(a) as being anticipated by Hideharu,
Japanese Patent Number 57-43255. Regarding claim 18:

a. Regarding the limitation of processor processing applications, Hideharu discloses a
system that can process information. (Lines 12-14 of the Abstract). Hideharu does not
disclose that the system is an avionics processor. It would have been obvious to one of
ordinary skill in the art at the time of the invention to use the processing system of
Hideharu as a processing system for avionic software application. Processing systems
are known to process software applications, one skilled in the art would be able to use the
processing system for avionic software.

b. Regarding the limitation of a second processor that is coupled to the first, Hideharu

discloses a controlling processor with operates and controls the doubled processor

10W12. (Lines 9-12 of the Abstract).

c. Regarding the limitation of enhancing integrity, Hideharu discloses a system in which

the controlling processor and the doubled processor 10W12 do not compare parallel

computation. The controller processor evaluates the status of the doubled processor

10W12. (Lines 1-6 of the Abstract).

17.   Regarding claim 19:

a. Regarding the limitation of generating state transitions signals, Hideharu discloses a

system that can change from a functional state to a broken down state. (Lines 12-16 of

the Abstract).

b. Regarding the limitation of comparing state transition signals and generating a fault

signal, Hideharu discloses a system that will read out signals for the doubled processor

10W12 and will detect a state of broken down and generates a signal in response. (Lines

12-21 of the Abstract).

18.   ˙Regarding the resetting the processor, Hideharu discloses a system wherein the response

signal is a reset signal. (Lines 18-21 of the Abstract).

19.   Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hideharu as

applied to claims 18 above, and further in view of Johnson, U.S. Patent Number 6,456,928.

Regarding claim 20, Hideharu teaches of a system with a doubled processor 10W12 and a

control process that can detect the state of the doubled processor 10W12 and generate a fault

signal for resetting of the doubled processor 10W12 if there is an error in that processor. (Lines

12-21 of the Abstract). Hideharu does not teach comparing a value to a predetermined limitation

of an aircraft. Johnson discloses a system that will compare a calculated value to a previous

value. (Lines 23-30 of Column 2, Lines 62-64 of Column 7, Figure 5 items 302-308, and the

Abstract Lines 3-5). It would have been obvious to one of ordinary skill in the art at the time of

the invention to incorporate the comparison of Johnson with the error detection of Hideharu

because, failure of a processor or aircraft failure can be determined before the fault cause a

malfunction to flight control. (Lines 35-40 of Column 1).

Claim Objections

20.   Claims 14-17 are objected to because of the following informalities: In claims 14-17,

means plus function is not written in acceptable terms. The acceptable practice is for the phrase

"mean for enhancing" or "means for executing" to be written as so. It is in appropriate to

separate the means from the function is the claim. Appropriate correction is required.

Allowable Subject Matter

21.   Claims 10-13 are objected to as being dependent upon a rejected base claim, but would

be allowable if rewritten in independent form including all of the limitations of the base claim

and any intervening claims.

22.   The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 10, the limitation of trace buffer disposed on general-purpose microprocessor is

not taught by any single or combination of references pertaining to the art.

23.   Regarding claim 11, the limitations of a derived dissimilar programs and a software

conversion tool is not taught by any single or combination of references pertaining to the art.

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to **Tim Bonura.** The examiner can normally be reached on **Mon-**

Fri: 7:30-5:00, every other Friday off. The examiner can be reached at: **703-305-7762.**

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, **Rob Beausoliel** can be reached on **703-305-9713.** The fax phone numbers for the

organization where this application or proceeding is assigned are:

703-746-7239 for regular communications

703-746-7240 for After Final communications

Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the **receptionist** whose telephone number is: **703-305-3900.**

Responses should be mailed to:

Commissioner of Patents and Trademarks

Washington, DC 20231

NADEEM IQBAL
PRIMARY EXAMINER

.Tim Bonura
Examiner
Art Unit 2184

tmb
May 5, 2003